1. (Amended) A method for encoding input data comprising the steps of:

applying an overlapped reversible wavelet transform to the input data using non-minimal length reversible filters to produce a series of coefficients [generating transformed signals in response to the input data, wherein the transformed signals are generated using a reversible wavelet transform;] and

compressing the series of coefficients [transformed signals] into data representing a losslessly compressed version of the input data.

Please cancel Claims 2 and 3 without prejudice.

4. (Amended) The method defined in Claim 1 [3] wherein said [at least one] non-minimal length reversible filters comprise[s] a plurality of one-dimensional filters.

6. (Amended) The method defined in Claim 1 wherein the step of compressing comprises embedded coding the series of coefficients [transformed signals], including the steps of ordering the series of coefficients and performing bit significance embedding on the series of coefficients after ordering [transformed signals].

8. (Amended) A method for decoding data into original data comprising the steps of:

decompressing a losslessly compressed version of input data into a plurality of transformed signals; and

5   generating a reconstructed version of original data from the plurality of

6   transformed signals <u>with</u> [using] an <u>overlapped</u> inverse reversible wavelet

7   transform <u>using non-minimal length reversible filters to produce a series of</u>

8   <u>coefficients</u>.

1   Please cancel Claims 9 and 10 without prejudice.

1   11.   (Amended) The method defined in Claim 10 wherein said [at

2   least one] non-minimal length reversible filter<u>s</u> comprise[s] a plurality of one-

3   dimensional filters.

1   12.   (Amended) A method for <u>processing</u> [encoding] input data

2   comprising the steps of:

3   generating a first plurality of transformed signals in response to the

4   input data[, wherein the transformed signals are generated using] <u>with</u> a

5   reversible <u>overlapped</u> wavelet transform <u>using a first pair of non-minimal</u>

6   <u>length reversible filters</u>;

7   compressing the first plurality of transformed signals into data

8   representing a losslessly compressed version of the input data;

9   decompressing the losslessly compressed version of the input data into

10   a second plurality of transformed signals; and

11   generating the input data from the second plurality of transformed

12   signals into a reconstructed version of the input data <u>with</u> [using] an inverse

13   reversible <u>overlapped</u> wavelet transform <u>using a second pair of non-minimal</u>

14   <u>length reversible filters</u>.

1   13.   (Amended) A method for encoding input data comprising the

2   steps of:

3   transform coding the input data into a series of coefficients <u>with an</u>

4   <u>overlapped reversible wavelet transform using a pair of non-minimal length</u>

5   <u>reversible filters</u>; and

6   embedded coding the series of coefficients, including the steps of

7   ordering the series of coefficients and performing bit significance embedding

8   on the series of coefficients, wherein a first type of embedded coding is

9   performed on a first portion of the data and a second type of embedded coding

10   is performed on a second portion of the data.

1   Please delete Claim 14 without prejudice.

1   17.   (Amended) A method for encoding input data comprising the

2   steps of:

3   transforming input data into a series of coefficients <u>with an</u> [using]

4   <u>overlapped</u> reversible wavelet[s] <u>transform using a pair of non-minimal</u>

5   <u>length reversible filters;</u>

6   converting the series of coefficients into sign-magnitude format [into a

7   series of formatted coefficients];

8   coding a first portion of the series of formatted coefficients using a first

9   type of embedded coding to produce a first bit stream; and

10   coding a second portion of the series of formatted coefficients using a

11   second type of embedded coding to produce a second bit stream, wherein the

12   first bit stream and second bit stream are combined into a single bit stream.

1   18.   (Amended) The method defined in Claim <u>17</u> [15] further

2 comprising entropy coding the single bit stream.

1   20.   (Amended) The method defined in Claim 17 wherein the first

2 portion comprises the high order bits <u>of the series of formatted coefficients</u>

3 and the second portion comprises the lower order bits <u>of the series of</u>

4 <u>formatted coefficients</u>.

1   Please add the following claims.

1   22.   (New) An encoder for encoding input data into a compressed

2 data stream, said entropy coder comprising:

3   a reversible wavelet filter for transforming the input into a plurality of

4 coefficients using a pair of non-minimal length reversible filters;

5   an embedded coder coupled to a reversible wavelet filter for

6 performing embedded coding on the plurality of coefficients to generate a bit

7 stream; and

8   entropy coder coupled to the embedded coder to perform entropy

9 coding on the bit stream to create coded data.

1   23   (New) An encoder for encoding input data comprising:

2   a transform coder coupled to receive the input data and generate a

3 series of coefficients that represent a decomposition of the input data using a

4 pair of non-minimal length reversible filters; and

5   an embedded coder coupled to receive the series of coefficients and

6 perform bit-significance encoding on the series of coefficients to create coded